

substitute pages 3 and 3a entered in the PCT Chapter II prosecution. There is no new matter in the Substitute Specification. A marked up copy of the specification showing the changes in the Substitute Specification is enclosed.

IN THE CLAIMS:

On page 11 of the claims, delete "Patent Claims" and substitute --I CLAIM AS MY INVENTION--.

Please cancel claims 1-10 entered as substitute pages (annexes) in the PCT prosecution and substitute new claims 11-24 as follows:

11. An engraving element of an electronic engraving machine for engraving printing forms, comprising:

a shaft oscillating around a longitudinal axis with small rotational angles;

a drive system for the shaft;

a lever attached to an end of the shaft with an engraving stylus for engraving the printing form;

a restoring element for the shaft;

a damping mechanism for the shaft having a damping element secured to the shaft as well as a stationary damping chamber filled with a damping medium connected to the shaft via a bearing;

the damping element being formed of at least one damping disk that is circular at least in regions and extending perpendicular to the shaft;

the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the damping chamber extending at least over the  
circular regions of the damping disk; and  
the damping medium being a ferro-fluidic fluid.

12. The engraving element according to claim  
5 11 wherein the damping mechanism is not rotationally  
symmetrical relative to an axial direction of the shaft.

13. The engraving element according to claim  
11 wherein the damping element is provided with through  
holes proceeding in an axial direction of the shaft.

14. The engraving element according to claim  
10 11 wherein the bearing connected to the shaft comprises  
a spoke bearing.

15. The engraving element according to claim  
14 wherein the spoke bearing is formed of:  
15 an inner ring surrounding and connected to the  
shaft;

one of a stationary outer ring and an outer ring  
segment surrounding the shaft at least in regions and  
spaced from the inner ring; and

20 a plurality of leaf springs proceeding radially  
relative to the shaft whose ends are respectively  
connected to the inner ring and to one of the outer ring  
and the outer ring segment.

09720999 034504  
T05T00 66602260

A

16. the engraving element according to claim 14 wherein the damping mechanism and the spoke bearing are structurally united with one another.

5 17. The engraving element according to claim 11 wherein the drive system for the shaft is designed as one of a piezoelectric and a magnetostrictive drive element.

18. The engraving element according to claim 11 wherein the bearing has a flexible member.

10 19. A damping mechanism for an engraving element for engraving printing forms, comprising:

A  
a damping element secured to a shaft of the engraving element oscillating around a longitudinal axis with small rotational angles;

15 a stationary damping chamber filled with a damping medium;

the damping element being formed of at least one damping disk circular at least in regions and extending perpendicular to the shaft;

20 the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the hollow-cylindrical damping chamber extending at least over the circular regions of the damping disk;  
25 and

the damping medium comprising a ferro-fluidic fluid.

TESTED 6606260

20. The damping mechanism according to claim 19 wherein it has a shape which is not rotational-symmetrical to an axial direction of the shaft.

5 21. The damping mechanism according to claim 19 wherein the damping element is provided with through holes proceeding in an axial direction of the shaft.

22. The damping mechanism according to claim 19 wherein the stationary damping chamber is connected to the shaft by a flexible bearing.

10 23. The damping mechanism of claim 22 wherein the flexible bearing has leaf spring spokes.

24. A damping mechanism for an engraving element for engraving printing forms, comprising:

15 a damping element secured to a shaft of the engraving element oscillating around a longitudinal axis;

a damping chamber filled with a damping medium; the damping element being formed of at least one damping disk and extending perpendicular to the shaft;

20 the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects;

the hollow-cylindrical damping chamber extending over the damping disk; and

25 the damping medium comprising a ferro-fluidic fluid.

---

09720999-024504  
F05720-66600760

A